

RADICAL CYSTECTOMY: Patient Educational Materials

According to the American Cancer Society, in 2011, approximately 70,000 people in the United States will be diagnosed with bladder cancer, and approximately 25% of them will eventually need to have their bladders removed to control the cancer. Bladder cancer occurs three times more often in men, usually between the ages of 50 to 70 years old.

What Will I Learn by Reading This?

You and your doctor are talking about a surgical procedure called a radical cystectomy as a way to control your bladder cancer. To help you get ready for your surgery, it is important for you to learn as much about this kind of treatment as possible. It is also important to learn how to manage your care following the surgery. You will learn:

- Description of the surgical procedure
- What to expect when you have a radical cystectomy
- What you need to do to prepare for the surgery
- How to take care of yourself after the surgery

What is the Main Function of the Bladder?

The urinary system, which includes the bladder, urethra, ureters, and kidneys, helps maintain stable chemical conditions in the body, stores and eliminates waste products. The bladder, a muscular chamber located in the lower abdomen, acts as a reservoir to collect urine. Two narrow tubes called ureters carry urine from the kidneys to the bladder. From the bladder, urine is emptied through another tube, the urethra, during urination.

What is a Radical Cystectomy?

The surgical procedure in which the bladder is removed is called a radical cystectomy. Bladder cancer tends to spread to other areas of the body, and thus the bladder and the surrounding organs are usually removed.

What Can I Expect From This Procedure?

In men, the prostate, seminal vesicles, and surrounding lymph nodes are removed. Men will not ejaculate after surgery. Although the ability to have an orgasm is not affected, many men may not be able to have a penile erection. It may be possible to spare the nerves controlling penile erection in some men. In these cases, restoration of potency usually occurs within one year of surgery. Alternative methods of achieving an erection can be used and should be discussed with your surgeon.

In women, often the ovaries, fallopian tube, uterus, cervix, part of the vagina, and surrounding lymph nodes are removed. Women who have their cervix or part of their vagina removed may have difficulty with sexual intercourse during the first few months after surgery. After several months, the tissue in the vagina may relax and lengthen, making sexual intercourse possible.

We personalize treatment plans to each individual patient. Some patients are best treated with an open operation. Many patients can now be treated using a robotic-assisted laparoscopic operation. In the open operation, an incision is made in the abdomen from the navel to the pubic bone. In the robotic-assisted laparoscopic operation, 6 small incisions (cuts) are created to insert the laparoscopic ports during the cystectomy portion of the surgery. A small incision is made in the abdomen to remove the bladder and lymph nodes as well as to create the urinary diversion, although this is done robotic-assisted laparoscopically in selected patients. Advantages of the robotic-assisted laparoscopic surgery can be decreased blood loss, earlier return of bowel function, shorter hospital stays, and earlier return to full activities.

What Happens Before the Operation?

You will be admitted to the hospital the day of your operation. The anesthesiology team will talk to you about their portion of the surgery. If you are a candidate, you may receive an epidural, which is a good option to manage post-surgery pain. The usual hospital stay is 6 to 8 days. On the day of surgery, your family can wait for you in the surgical waiting area on the first floor of the Ronald Reagan Hospital. It usually takes 4 to 8 hours to complete this operation. On completion of the operation the surgeon will contact your family there. A portion of your intestines will be used to create the urinary diversion. It is important that the entire intestine be clean before surgery, and that you prepare your gastrointestinal tract prior to admission to the hospital. Your surgeon will provide you specific instructions for the bowel preparation.

What Happens After the Operation?

After the operation, you will be taken to the recovery room until you are awake and stable. Any pain or discomfort will be relieved with medications. Many patients will have an epidural, while others will receive narcotics as needed. Some patients will need to stay in the Intensive Care Unit (ICU), while most will be transferred to a regular hospital room. Depending on the specifics of your surgery, you may have a tube placed into your nose to decompress the stomach. You will be able to start drinking liquids when your intestines begin to recover. Intravenous fluids will provide nutrition in the meantime. Drinking and eating too soon may lead to nausea or vomiting. You will also not have a bowel movement for several days after surgery until the intestines recover.

It is important to sit up and walk starting as early as the day after surgery. This will help prevent serious complications such as pneumonia and blood clots to form in the legs. Nurses and physical therapists will assist you as needed.

When you go home, most patients will be prescribed medication for pain and medication to prevent constipation, a common side effect from pain medication. Some patients may be given antibiotics. Take these as directed.

It takes about 5 working days for the pathology to return. Generally you will still be in the hospital. If not, we will call you with the results. Based on the pathology, we may discuss with you future treatments that may be necessary.

When Will I Have My First Follow-up Appointment with my Doctor?

Call your doctor's office to make an appointment for your post-operative check. Your first doctor visit after your surgery is usually scheduled for 2 to 3 weeks after you leave the hospital.

Even after surgery, you will need to be seen routinely in clinic to make sure the cancer has not returned or to arrange further treatments. Make sure you don't miss any follow-up appointments.

However, if you experience any of the following before your appointment, please call your surgeon's office at any time. After hours you will be able to contact an on-call physician. Occasionally, you may need to be directed to the nearest emergency room.

- You notice any pain or swelling in your legs, sudden chest pain, or shortness of breath
- Expanding redness, tenderness, warmth, or swelling at the incision
- You develop a fever
- You develop severe nausea or vomiting

- The catheters become completely plugged
- You have any other questions or concerns

Will My Physical Activity Be Restricted After Surgery?

It is critical to remain active even while you are recovering from surgery. Walking every day is important and will speed up the healing process, decrease depression, and increase muscle tone. It takes approximately 6 weeks for the surgical area to heal completely. Please do not do any heavy lifting, strenuous exercises, or excessive stair climbing during this time. You may drive a car 3 to 4 weeks after surgery if you feel well and are not taking any more prescription pain medications.

Will I be on a Special Diet After Surgery?

Specific diet recommendations will be given at the time of discharge. Most patients will be able to eat a regular diet at the time of discharge. However, it is common for the intestines to slow down after this type of surgery, so we recommend eating smaller, more frequent meals, and drinking plenty of liquids until your initial follow-up appointment.

What is Urinary Diversion?

A urinary diversion is necessary when the bladder is removed to divert the flow of urine.

What are the Types of Urinary Diversions?

Once the bladder is separated from the ureters and urethra, it is necessary to provide another way to collect and drain the urine. Several options exist and depend on the overall health of the patient, the extent of cancer, and an individual's motivation and active participation in their care.

In selected patients, a portion of the intestines is used to create a new bladder or **neo-bladder**. The ureters are joined to one end of the neo-bladder and the other end is connected to the remaining portion of the urethra. The new bladder is constructed in such a way that it will provide a reservoir to store urine and control urine flow. You may urinate in much the same way you do now.

For patients who receive the neo-bladder, you will notice that you will not be able to hold any urine in the neo-bladder initially. This is temporary. Please buy incontinence pads or pull-ups for the first few weeks to months after the surgery. Most patients will gain control of their urine within a few months.

However, at the time of surgery if your urethra is involved with cancer, it will need to be removed and some patients may benefit from creating a **continent diversion**, where one end of the new bladder will be brought out to the side of the abdomen to create a stoma without the use of an appliance bag. A small catheter is then passed through the stoma to drain out the urine and empty the new bladder 4 to 6 times a day.

These options are the most complex reconstruction requiring a motivated individual and both may require the ability to self-catheterize the bladder. For both neo-bladders and continent diversions, you may need to irrigate your new bladder to remove excess mucus. Since the urinary diversion is constructed from the intestine, the presence of mucus in the urine is normal following this surgery.

Some patients are better served by creating a simpler **ileal conduit**. This is created using a shorter portion of intestine between the ureters to a stoma connected to the side of the

abdomen. It acts as a funnel to drain urine from the kidneys to an appliance bag attached to the patient's skin. It has the disadvantages of requiring an ostomy bag, but is a shorter and simpler operation with the least chance of post-operative or long-term complications.

What are the Drains Needed For?

To provide drainage of urine from your kidneys to the urinary diversion, you will have two temporary stents (plastic tubes) that will be visible on the outside of your body. With a neo-bladder or continent diversion, you will also have 1 to 2 catheters to drain the bladder until it heals. With an ileal conduit, you will have only an appliance over the stoma. All patients will usually also have a temporary drain connected to a bulb to collect extra fluid. This is usually removed before discharge.

Again, since the urinary diversion is constructed from the intestine, the presence of mucus in the urine is normal following this surgery. The mucus will decrease over a period of time. This is especially important for neo-bladders and continent diversions. Immediately after surgery, to prevent the catheters from becoming plugged, it is important that they be regularly flushed with sterile water. You will be given supplies and taught how to irrigate these catheters.

The stents and catheters may stay in place up to 2 to 4 weeks to allow adequate time to heal. The surgeon will let you know when they will be removed.

What Kind of Support and Help Can I Expect?

You will not go through this surgery alone. While in the hospital you will be given instructions on the care of your catheters and stents. A nurse specializing in stomas will see you several times if you have a stoma. For many of our patients, visiting nurses will come to your home daily to help you care for your drains and check on you after you are discharged from the hospital.

A radical cystectomy and urinary diversion can present a difficult emotional adjustment. Support is available to help patients deal with this impact on their lives. A social worker is part of the team to care for patients while in the hospital. Patients or their families can request a social worker to help provide emotional support during this difficult time. After discharge, the social worker can provide names and numbers of support groups. You can call (310) 825-7171 to talk to the social workers.

Questions to Ask Your Doctor

These questions may be useful to you when you talk to your doctor about your bladder cancer and the radical cystectomy surgical procedure:

- Will I need more treatment after surgery?
- What are the risks of having this surgery?
- Are there side effects to the surgery?

Hints for Talking with Your Doctor

These tips may help you keep track of the information you and your doctor talk about during your visits:

- Make a list of questions you want to ask your doctor before your appointment.

- Bring a friend or family member to sit with you while you talk with your doctor. Some people get very nervous when they visit their doctor. Sometimes you can't remember everything that you talk about with your doctor. A friend or family member can help you remember what you and your doctor talked about.
- You, or the person who goes with you, may want to take notes during your appointment.
- Ask your doctor to slow down if you need more time to write down your notes.
- You may want to ask your doctor if you can use a tape recorder during your visit. Take notes from the tape after your visit is over. This way, you can review your talk with your doctor as many times as you want.

What Have I Learned by Reading This?

- What the function of the bladder is,
- What a radical cystectomy is and why you may need to have this procedure,
- How to prepare for the surgery and what to expect after the surgery.

If you have any questions, please talk to your doctor or health care team. It is important that you understand what is going on with your surgery and general healthcare. This knowledge will help you take better care of yourself and feel more in control so that you can get the most from your treatment.

Key Words

Bladder: muscular chamber located in the lower abdomen and acts as a reservoir to collect urine.

Catheter: tube placed in the body for removing or putting fluids into the body.

Ejaculate: to release semen during an orgasm in a male.

Fallopian tube: tube that transports the egg from the ovary to the uterus (the womb).

Ileal Conduit: acts as a funnel to drain urine from the kidneys to an appliance bag attached to the patient's skin.

Intestines: digestive organs including the small intestines and colon.

Intravenous Fluids: giving fluids into the veins

Kidneys: pair of organs located in the right and left side of the abdomen which clear "poisons" from the blood, regulate acid levels and maintain water balance in the body by getting rid of urine.

Lymph nodes: small rounded masses of lymphatic tissue surrounded by a capsule of connective tissue. Lymph nodes filter the lymphatic fluid and store special cells that can trap cancer cells or bacteria that are traveling through the body in the lymph fluid.

Neo-bladder: a new bladder created by using a portion of the intestines.

Ovaries: produce eggs (ova) and female hormones.

Penile Erection: when the penis fills with blood and is rigid.

Prostate: gland within the male reproductive system that is located just below the bladder.

Radical Cystectomy: surgical procedure in which the bladder is removed.

Robotic-assisted Laparoscopic Operation: minimally invasive surgery, with the aid of a robotic machine, in which small incisions (cuts) are made in the abdominal wall through which a camera and instruments are placed to perform the operation.

Seminal Vesicles: structure in men that is located behind the bladder and above the prostate gland, and contributes fluid to the ejaculate.

Stent: tube designed to be inserted into a vessel or passageway to keep it open.

Ureters: two narrow tubes that carry urine from the kidneys to the bladder.

Urethra: transport tube leading from the bladder to discharge urine outside the body.

Urinary Diversion: rerouting the flow of urine.

Urinary System: includes the bladder, urethra, ureters, and kidneys, and helps maintain stable chemical conditions in the body, stores and eliminates waste products.

Uterus: a hollow, pear-shaped organ located in a woman's lower abdomen between the bladder and the rectum.